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TRANSMITTAL LETTER
(General - Patent Pending)

Docket No.
144/01890

In Re Application Of: Ben TE-ENI, et al.

[Handwritten mark]

Serial No. 09/673,761	Filing Date October 18, 2000	Examiner Not yet assigned	Group Art Unit 2681
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Title: **METHOD AND SYSTEM FOR PROVIDING CELLULAR COMMUNICATIONS SERVICES**

TO THE COMMISSIONER OF PATENTS AND TRADEMARKS:

Transmitted herewith is:

1. Corrected IPER from the International Application, No. PCT/IL99/00214, including annexes
2. Accompanying letter

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Technology Center 2600

in the above identified application.

- ☒ No additional fee is required.
- ☐ A check in the amount of _____ is attached.
- ☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. **03-3419** as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of _____
 - ☒ Credit any overpayment.
 - ☒ Charge any additional fee required.

Paul Fenster
Signature

Dated: April 3, 2001

Paul FENSTER, Reg. No. 33,877

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I certify that this document and fee is being deposited on **April 4, 2001** with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.

William H. Dippert
Signature of Person Mailing Correspondence

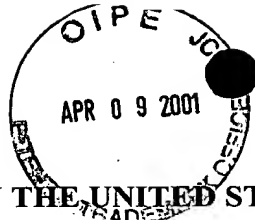
William H. Dippert

Typed or Printed Name of Person Mailing Correspondence

CC:

[Handwritten mark]

144/01890



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ben TE-ENI, et al.
Serial Number: 09/673,761
Filed: October 18, 2000
For: METHOD AND SYSTEM FOR PROVIDING CELLULAR
COMMUNICATIONS SERVICES
Art Unit: 2681
Examiner: Not yet assigned

Honorable Commissioner of Patents and Trademarks
Washington DC 20231

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SUBMISSION OF CORRECTED IPER

Sir:

Further to the receipt of a corrected IPER in the International Application corresponding to the present application, applicants hereby submit the corrected IPER.

Applicants note that the claims in the application generally correspond to the IPER claims that were indicated as being allowable over the prior art, in the International Stage (USPTO).

Applicants submit that the claims define patentable subject matter and that the application is ready for allowance. Notice to that effect is respectfully solicited.

Respectfully submitted,
B. TE-ENI, et al.

Paul Fenster
Paul Fenster
Reg. No. 33,877

April 3, 2001
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PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: GIL ISRAELI
38 HAGHEFEN ST
KARME-YCSEP 99797
ISRAEL

PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing
(day/month/year)

12 FEB 2001

Applicant's or agent's file reference

NONE

IMPORTANT NOTIFICATION

International application No.

PCT/IL99/00214

International filing date (day/month/year)

22 APRIL 1999

Priority Date (day/month/year)

22 APRIL 1998

Applicant

NETLINE COMMUNICATIONS TECHNOLOGIES (NCT) LTD.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US
Commissioner of Patents and Trademarks
Box PC7
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

CHARLES R ORAMER

Telephone No. (703) 305-3965

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NONE	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IL99/00214	International filing date (day/month/year) 22 APRIL 1999	Priority date (day/month/year) 22 APRIL 1998
International Patent Classification (IPC) or national classification and IPC IPC(7): H04Q 7/20; H04B 1/38; H04M 1/00 and US Cl.: 455/456, 422, 461, 433, 560, 414		
Applicant NETLINE COMMUNICATIONS TECHNOLOGIES (NCT) LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 09 NOVEMBER 1999	Date of completion of this report 17 NOVEMBER 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer CHARLES R. CRAY <i>Rafaelia Zogar</i>
Facsimile No. (703) 305-3230	Telephone No. (703) 305-3965

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/IL99/00214

I. Basis of the report

1. With regard to the elements of the international application: *

☐ the international application as originally filed

☒ the description:

pages 1-21, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

☒ the claims:

pages NONE, as originally filed

pages NONE, as amended (together with any statement) under Article 19

pages NONE, filed with the demand

pages 22-26, filed with the letter of 17 JULY 2000

☒ the drawings:

pages 1-6, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

☒ the sequence listing part of the description:

pages NONE, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☒ the description, pages NONE

☒ the claims, Nos. NONE

☒ the drawings, sheets/fig NONE

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/IL99/00214

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)	Claims <u>1-35</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-35</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-35</u>	YES
	Claims <u>NONE</u>	NO

2. citations and explanations (Rule 70.7)

Claims 1-35 meet the criteria set out in PCT Article 33(2)-(4) for the following reasons:

Regarding claim 1, the prior art does not teach or fairly suggest at least one front end device separate from a base station, but installed within or nearby, configured to monitor messages to and from said base station, and also comprising position determining means and a management system containing subscriber profiles to control services based on said locations.

Regarding claim 17, the prior art does not teach or fairly suggest a position determining apparatus for a cellular system transmitting a separate radio signal having the characteristics of a base station signal, and wherein mobile stations which communicate with said base station report information related to the strength and frequency of the received signals.

Regarding claims 25 and 27, the prior art does not teach or fairly suggest that said radio signal information may be adjacent cell information received from mobile stations, or that said management system may receive signals from other switching center software.

Claims 2-16, 18-24, 26 and 28-35 meet the criteria set out in PCT Article 33(2)-(4) based upon their dependence upon claims 1, 17, 25 and 27.

----- NEW CITATIONS -----

US 5,568,153 A. (BELIVEAU) 22 October 1996
US 5,613,209 A. (PETERSON et al) 18 March 1997
US 5,243,530 A. (STANIFER et al) 07 September 1993
US 5,235,633 A. (DENNISON et al) 10 August 1993
US 5,561,836 A. (SOWLES et al) 01 October 1996

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/IL99/00214

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 8 and 20 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because the claims are indefinite for the following reason(s):

Claim 8 recites the limitation "interconnected with a mobile switching". Claim 20 recites the limitation "the cellular system switching software". There is insufficient antecedent basis for said limitations.

1PEA/US 17 JUL 2000

144/01641.A01

CLAIMS

1. Apparatus for controlling mobile communication services in a cellular system in which mobile stations communicate to a network via cellular system base stations, comprising:

5 at least one front end device separate from a base station and installed within or nearby a predefined area, said front end device being configured to monitor exchange of messages between mobile stations and cellular system base stations;

position determining apparatus that determines the position of mobile stations responsive at least to the monitored exchanges; and

10 a management system containing database of subscriber profiles and configured to control enabled services to subscribers depending upon locations of subscribers with respect to said predefined area.

2. Apparatus according to claim 1 wherein the predetermined area is an area closed by walls which at least partially absorb radio waves utilized for exchange of said messages.

3. Apparatus according to claim 1 wherein the at least one front end device has a range smaller than the range of the bases stations for receiving messages from the mobile stations.

20 4. Apparatus according to claim 1 wherein the position determining apparatus determines the position to a resolution better than that possible based on monitoring of the messages at the base stations.

25 5. Apparatus according to claim 1, wherein the management system is interconnected with a mobile switching center and wherein control of enabled services includes selective screening of calls.

30 6. Apparatus according to claim 1, wherein the management system is interconnected with a mobile switching center and wherein control of enabled services includes blocking of calls to at least some of the mobile stations located within the area.

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7. Apparatus according to claim 6, wherein the management system is interconnected with a mobile switching center and wherein control of enabled services includes blocking of calls from at least some of the mobile stations located within the area.

5 8. Apparatus according to claim 1, wherein the management system is interconnected with a mobile switching and wherein communication services depending on location include available connection bandwidth.

10 9. Apparatus according to claim 1, wherein said at least one front end device employs geographical intersection techniques to determine location of a received mobile station originated message and transfers said location information to said management system.

10. Apparatus according to claim 1, and including an input via which said database profile entries can be dynamically updated.

15 11. Apparatus according to claim 1 wherein the front-end device incorporates a local interface to an external system via which subscriber identity information is reported.

20 12. Apparatus according to claim 11, wherein the external system is a time logging system.

13. Apparatus according to claim 11 wherein the external system is a security granting device.

25 14. Apparatus according to claim 1 wherein the front end device is implemented in a personal computer.

15. Apparatus according to claim 1 wherein the front-end device is configured to locally communicate SMS type messages with locally registered mobile stations.

30 16. Apparatus according to claim 1 wherein the front-end device is configured to locally communicate high band-width content within the predefined area.

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144/01641.A01

17. Apparatus for determining the position of mobile stations in a cellular system in which mobile stations communicate to a network via cellular system base stations, comprising:

a radio transmitter separate from said base stations that transmits a separate radio signal having characteristics of a base station, wherein said mobile stations receive said signals and reports information related to the strength and frequency of signals having base station characteristics, including said separate signal;

a management system having a database of radio signal characteristics and locations;

position determining apparatus that determines the position of mobile stations responsive the reported information and the database.

18. Apparatus according to claim 17 wherein the separate radio signal has the characteristics of a base station control channel.

19. Apparatus according to claim 17 wherein the management system receives the radio signal information from cellular system switching center software.

20. Apparatus according to claim 17 wherein the management system is implemented within the cellular system switching center software.

21. Apparatus according to claim 17 wherein the separate radio signal has a power substantially lower than the power of a radio signal transmitted by a base station, such that reception of the separate signal by a mobile station is more limited in extent than that of a similar signal broadcast by a base station.

22. Apparatus according to claim 17 wherein the separate radio signal is broadcast within a predetermined area closed by walls which at least partially absorb radio waves utilized for exchange of said messages and wherein the position determining apparatus determines whether the mobile unit is within or without the predetermined area.

23. Apparatus according to claim 17, wherein said separate radio signals are transmitted in frequencies different than cellular network operating frequencies.

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24. Apparatus according to claim 23 and including a corresponding receiver for said separate radio signals attached to the mobile stations.

25. Apparatus for determining the position of mobile stations in a cellular system in which mobile stations communicate to a network via cellular system base stations, comprising:

a radio transmitter transmitting a representative radio signal, having characteristics representing a predefined area where said signal is received;

a management system interconnected with cellular switching center, said management system having a database of representative radio signal characteristics and locations, said management system receives information of representative radio information received by mobile stations and compares them with said database, thereby extracting a list of mobile stations location within said predefined area,

wherein said radio signals information received by said management system is adjacent cell information received from mobile stations.

26. Apparatus according to claim 25, wherein said management system is implemented within the cellular system switching center software.

27. Apparatus for determining the position of mobile stations in a cellular system in which mobile stations communicate to a network via cellular system base stations, comprising:

a radio transmitter transmitting a representative radio signal, having characteristics representing a predefined area where said signal is received;

a management system interconnected with cellular switching center, said management system having a database of representative radio signal characteristics and locations, said management system receives information of representative radio information received by mobile stations and compares them with said database, thereby extracting a list of mobile stations location within said predefined area,

wherein said management system receives said radio signal information from cellular system switching center software.

28. Apparatus according to claim 27, wherein said management system is implemented within the cellular system switching center software.

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1PEADS 17 JUL 2000

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29. Apparatus according to any of claims 17-28, wherein said radio signals are implemented according to Shared Wireless Access Protocol (wireless Access) and a corresponding receiver is attached to the mobile stations.

5 30. Apparatus for controlling mobile communication services in a cellular system in which mobile stations communicate to a network via cellular system base stations, comprising:
position determining apparatus according to any of claims 17-28; and
a management system containing database of subscriber profiles and configured to control enabled services to subscribers depending upon locations of subscribers.

10 31. Apparatus according to claim 30, wherein the management system is interconnected with a mobile switching center and wherein control of enabled services includes selective screening of calls.

15 32. Apparatus according to claim 30, wherein the management system is interconnected with a mobile switching center and wherein control of enabled services includes blocking of calls to at least some of the mobile stations located within a predetermined area.

20 33. Apparatus according to claim 32, wherein the management system is interconnected with a mobile switching center and wherein control of enabled services includes blocking of calls from at least some of the mobile stations located within a predetermined area.

25 34. Apparatus according to claim 30, wherein the management system is interconnected with a mobile switching, and wherein communication services depending on location include available connection bandwidth.

35. Apparatus according to claim 30, and including an input via which said database profile entries can be dynamically updated.